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# THE CALIFORNIA MEDICAL JOURNAL

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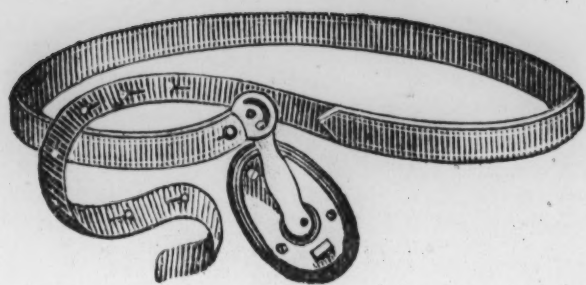
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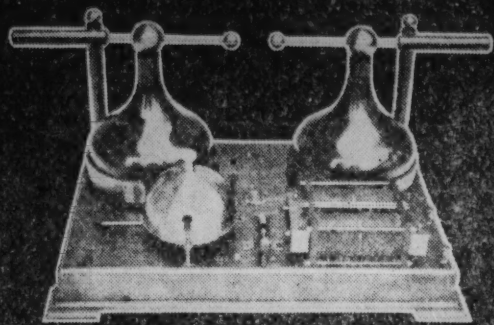
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VOL. XXV.

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No. 5.

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## What Little I Know About Heat.

M. SCHIRMAN, M. D.

Read at a meeting of the San Francisco County Society of Physicians and Surgeons.

IN physiological science almost every other branch has been made the subject of systematic treatise without number, and some even have been raised to the rank of distinct science by the badge of some characteristic title; *Heat* alone has been left to form a chapter of chemistry, or to receive a passing notice in treatises of general physics. Light has long enjoyed the exclusive attention of philosophers, and has been elevated to the dignity of a science under the name of Optics, Electricity and Magnetism have also been thought worthy subjects for separate treatises. Yet can any one who has observed the part played by heat, in the theater of nature, doubt that its qualities are equal to those of light and superior to those of electricity and magnetism. It is possible for organized matter to exist without light.

Innumerable operations of Nature proceed as regularly and as effectually

in its absence as when it is present. Light is, so to speak, an object rather of luxury than of positive necessity. Nature supplies it therefore not in unlimited abundance, nor at all times and places, but rather with that thrift and economy which she is wont to observe in dispensing the objects of our pleasures, compared with those which are necessary to our being. But heat, on the contrary, she has yielded in the most unbounded plenteousness. Heat is everywhere present. Every body that exists contains it in quantity without known limit. The most inert and rude masses are pregnant with it. Whatever we see, hear, smell, taste or feel is full of it. To its influence is due that endless variety of forms which are spread over and beautify the surface of the globe. Land, water, air, could not for a single instant exist as they do, in its absence; all would suddenly fall into rude, formless mass, solid and im-



penetrable. The air of heaven hardening into a crust would envelop the globe, and crush within an everlasting tomb all that it contains. Heat is the parent and the nurse of the endless beauties of organization. The mineral, the vegetable, the animal kingdoms are its offspring. Every natural structure is either immediately produced by its agency, maintained by its influence, or intimately dependant on it. Withdraw heat, and instantly all life, motion, form and beauty will cease to exist, and it may be literally said, "Chaos has come again."

The chemist, in all his proceedings, is beset with the effects of heat, aiding or impeding his researches. Now it promotes the disunion of combined elements, now fuses into one uniform mass the most heterogeneous materials. Composition and decomposition are equally attended by its evolution and absorption; and often to such an extent as to produce tremendous explosions on the one hand, or cold, exceeding the rigors of the most severe polar winter on the other.

Nor is heat less instrumental in the processes of art than in the operations of nature. All that art can effect on the productions of nature is to change their form of arrangement—to separate or to combine them. Bodies are molded to forms which our wants or our tastes demand; at its bidding the most obdurate masses soften like wax, and are fashioned to suit our most wayward caprices. In all such processes heat is the agent. Elements of bodies knit together by the most stubborn affinities, by forces which might well be deemed

invincible, are torn asunder by this omnipotent solvent and separately presented for the use or the pleasure of man, the great master of art.

If we turn from art to science, we find heat assisting or obstructing as the case may be, but always modifying the objects of our inquiry. The common spectator who, on a clear night, beholds the firmament, thinks he obtains a just notion of the position and arrangement of the brilliant objects with which it is so richly furnished. The more exact vision of the astronomer discovers, however, that he beholds this starry vault through a distorting medium; that in fact, he views it through a great lens of air, by which every object is removed from its proper place; nay, more, that this distortion varies from night to night, and from hour to hour, varies with the varying heat of the atmosphere which produces it. But why repair to the observatory of the astronomer or to the laboratory of the chemist for examples of a principle which is in never ceasing operation around us? Sleeping or waking, at home or abroad, by night or by day, at rest or in motion, in the country or in town, traversing in the burning limits of the tropics or exploring the rigors of the poles, we are ever under its influence, we are at once its slaves or its masters.

We are its slaves.—Without it we can not for a moment live; without its well regulated quantity we cannot for a moment enjoy life. It rules our pleasures and our pains; it lays us on the sick bed, and raises us from it. It is our disease and our physician. In the



ardor of summer we languish under its excess, and in the rigor of winter we shiver under its defection. If it accumulates around us in undue quantity, we burn with fever; if it depart from us with unwonted rapidity, we shake with ague, or writhe under the pains of rheumatism, and the tribe of maladies which it leaves behind when it quits us.

We are its masters.—We subdue it to our will and dispose it to our purpose. Amid arctic snows we confine it around our persons, and prevent its escape by a clothing impervious to it. Under a tropical sun we exclude it by like means. We extort it from water to obtain the luxury of ice in hot seasons and we force it in water to warm our apartments in cold ones. If we traverse the seas, it lends wings to the ship and bids defiance to the natural opponents—the winds and the tides. If we traverse the land it is harnessed to the chariot, and we outstrip the flight of the swiftest bird, and the fury of the tempest.

If we sleep, our chamber and our couch are furnished with contrivances for its due regulation. If we eat, our food owes its savor and its nutrition to heat. From this, the fruit receives its ripeness, and by this the viands of the table are fitted for our use. The grateful infusion which forms our morning repast might remain for ever hidden in the leaf of the tree, the berry of the plant or the kernel of the nut, if heat did not lend its power to extract them. The beverage that warms and cheers us, when relaxed by labor or overcome by fatigue, is distilled, brewed, or fer-

mented by the agency of heat. The productions of Nature give up their sanative principles to this all powerful agent; and hence the tincture or the pill is produced to restore health to the sinking patient.

When the sun hides his face and the heavens are veiled in darkness, whence do we obtain light? Heat confers light upon air, and the taper burns, and the lamp blazes (flame is gas, or air rendered so hot as to become luminous), producing artificial day; guiding us in the pursuits of business or of pleasure, and thus adding to the sum of life by rendering hours pleasant and useful which must otherwise have been lost in torpor or in sleep. But it is not alone the intrinsic importance of the subject, nor its connection with every natural appearance that can attract observation or excite inquiry, which has induced us to examine it. It presents other advantages which merit peculiar consideration, the subject abounds in examples of the most felicitous processes of induction, from which we may obtain a view of that beautiful logic, the light of which Bacon first let in on the obscurity in which he found physics involved, and finally the whole range of our domestic experience presents a series of familiar and pointed illustrations of the principles to which it leads.

The first and most common effect of heat is to increase the size of the body to which it is imparted. This effect is called dilation, or expansion; and the body so affected is said to expand or be dilated. If heat be abstracted from a body the contrary effect is produced and the body contracts.



The dilation of solids is very minute, even by considerable additions of heat; that of liquids is greater, but that of air is greatest of all.

The force with which a solid dilates is equal to that with which it would resist compression, and the force with which it contracts is equal to that which it would resist extension.

The force with which liquids dilate is equivalent to that with which they would resist compression; as liquids are nearly incompressible, this force is very considerable. The air is capable of being compressed with facility, its dilation by heat is easily resisted. If such dilation be opposed by confining air within fixed bounds, then the effect of heat, instead of enlarging its dimension, will be to increase its pressure on the surface by which it is confined.

The works of clocks and watches swell and contract with the vicissitudes of heat and cold to which they are exposed. When the pendulum of a clock or balance wheel of a watch is thus enlarged by heat it swings more slowly, and the rate is diminished. On the other hand when it contracts by cold, its vibration is accelerated and the rate is increased.

When boiling water is poured into a thick glass, the unequal expansion of the glass will tear one part from another and produce fracture; the same vessel contains a greater quantity of cold than of hot water.

If a kettle, completely filled with cold water be placed on a fire, the water when it begins to get warm, will swell and spontaneously flow from the spout of the kettle until it ceases to expand.

Thus we perceive that the magnitude of a body depends on the quantity of heat which has been imparted to it or abstracted from it; and as it must be in a state of variation with respect to the heat which it contains, it follows that it must be in a state of continual variation with respect to its magnitude. We can, therefore, never pronounce on the magnitude of any body with exactness unless we are at the same time informed of its situation with respect to heat. Every hour the bodies around us are swelling and contracting, and never for one moment retain the same dimensions; neither are these effects confined to their exterior dimensions, but extend to their most intimate component particles. These are in a constant state of motion alternately approaching and receding from one another changing their relative positions and distances. Since the magnitude of any body changes with the heat to which it is exposed and since, when subject to the same caloric influence, it always has the same magnitude these dilations and contractions which are the constant effects of heat may be taken as the measure of the physical cause which produced them; the changes in magnitude which a body suffers by changes in the heat to which it is exposed, are called changes of temperature; and the actual state of a body at any moment, determined by comparison of its magnitude with the heat to which it is exposed is called its temperature.

The variation of magnitude of any body is taken as a measure of temperature; but as it would be inconvenient in practice to adopt different measures



of temperature, one body is selected by the dilation and contraction of those which all other bodies are measured and with this body a thermometer or measure of temperature is formed. The substance most commonly used for this purpose is a liquid metal called mercury or quicksilver.

Heat as a therapeutic agent is of great value, especially in the treatment of acute and chronic rheumatism and allied conditions of the body. "Dry Heat," or the so called Dry Hot Air is the most prominent of the heat agents

in therapeutics. The well known Dry Hot Air Apparatus is so constructed that from 300 to 450 degrees F. or more can be applied without discomfort to the patient. The treatment is of decided benefit in articular and muscular rheumatism, gout, sprains, ankylosis, lumbago, coxitis, etc., etc.

Mostly after the first treatment pain is diminished and after each further treatment effusions adhesions and deposits in joints are absorbed and affected parts brought to as normal states as possible; such has been my experience.

---

### The Epithelial Tissues.

THE epithelial tissues are a class of tissues of which much might be said, they generally are a great stumbling block to the student of the minute anatomy. Their derivation is charged to all three layers of the blastoderm. Their uses are manifold; for instance, the epithelium of the skin (epidermis) serves as a protector.

In the gastro-intestinal mucous membrane the epithelium seems to be active in the separation of the secretions from the blood or from the alimentary fluids. In the nose, fauces or respiratory passages its chief office seems to be to preserve an equable temperature by the moisture poured out on the surface. In all internal parts they insure a perfectly smooth surface; they are generally divided into classes for convenience of study or to further mystify the student, the separa-

tion, such as it is, must necessarily be artificial as every gradation of transition between the two classes can be observed.

Those classified as the true epithelial tissues, occur as you already know, as one or more layers of nucleated cells united by an intercellular substance (the secretion of the cells) resting on a basement membrane, which has been said to be made up of processes derived from the basal portion of the cells. Since in this class of tissues one surface lies free, it is subject to the acquirement of cuticular processes; in other cases cilia are developed, the cell body is striated, in some cases for more than half its length, while the basilar end where the nucleus is located, on account probably of a sense of being near the focus of nutrition, shows an indifferent granular protoplasm; the outer or free



surface is of animal nature, the inner of vegetative function. This is also known as the polarity of cells and is retained even after the epithelial cell assumes other functions.

In very exceptional cases do blood or lymph vessels penetrate into the epithelia but in the intercellular and lymph spaces, lymph plasma is found for the nourishment of the cells.

Another classification demands our attention, that is, whether the tissue be simple according to there being a single layer or, *Stratified*, as more than one layer or rather several layers superimposed one upon the other varying greatly in shape. Still more classification must be made in order to thoroughly understand the subject. The shape and relation must be taken into consideration.

In this order we have: Squamous, Cubic, Columnar, Pseudo-stratified columnar, Stratified Squamous, Stratified columnar, with or without cilia, Transitional, Glandular epithelium, Neuroepithelium.

We will, now that we have had an introduction to the various members of the family, study their several peculiarities a little more fully.

First: From his simplicity the first to demand our attention is the Squama or Scale, a single layer of flattened cells, with the nuclei in its center, found in the alveoli of the lungs; hair, nails and horns are modifications of this kind of cells.

Second: Simple Cubic might be said to be elder brothers to simple squamous, the only difference being that they are a little higher assuming a

cubic form, these occur in smaller and smallest bronchiole portions of the uriniferous tubules, smaller ducts of mucous and salivary glands, liver, pancreas, etc.

Simple columnar being the limit of modification in that it is just a little taller than simple cuboid, appearing as columns generally having a well marked cuticular border, occurs in the gastrointestinal tract from the cardia to the anus, the glands in connection therewith, part of the urethra, uterus, kidneys, etc., etc.

A ciliated form is found in the oviduct uterus, central canal and smaller bronchi. Psuedo-stratified needs no explanation, it is obtaining recognition upon false representations, however, it usually possesses cilia and is found in some portions of the respiratory passages.

True stratified squamous now asks our attention. Epithelium of this type generally consists of a basal layer of columnar cells and a transition of gradation to a layer of squamous cells on the free surface found in the epidermis with its continuations into the body, walls or oral cavity, esophagus, conjunctiva, vagina, ext. auditory canal, external sheath of the hair follicles, etc.

The papillæ of connective tissue are characteristic of stratified epithelium, serving to fasten the tissue securely and also to present more surface to the source of nutrition. Where there are a great many layers the intercellular spaces and intercellular bridge are numerous for the passage of the lymph plasma to the more superficial layers.

Transitional is a stratified form con-



sisting of four to six layers of cells, the deepest being irregularly polygonal, columnar, triangular or even cubic with gradations to the flat, bulging superficial layer whose cells (sometimes contain several nuclei) convex on their free surface pitted underneath to receive the cells of the next layer, the whole resting on a basement membrane devoid of papillæ and found in the pelvis, kidney, ureters, bladder and portion of male urethra.

**Stratified Columnar:** The cells of the superficial layer are essentially cylindrical or columnlike; the deeper layers may be variously shaped, found in the gland ducts (larger), Olfactory mucous membrane, palpebral conjunctiva, ant. portion male urethra, vas deferens, regions of the larynx. As ciliated respiratory portion of nose, larynx, trachea, larger bronchi, epididymus, part vas deferens. Glandular epithelium, ciliated or otherwise, is represented by a modification of columnar, the Goblet or Chalice cells, the cells appear distended in their upper part by the secretion of mucin, until such time as the capsule must give way, burst and discharge its contents on the free surface. Singly they are also known as unicellular glands. All respiratory and intestinal cells have the power to become glands of above variety; protoplasm is compressed by paraplast. After the discharge, should the cell die, its place is soon occupied by the closing in of the contiguous cells.

**Neuro epithelium** is a specialized type in the vicinity of nerve terminals, found in the inner ear and taste buds.

**Mesothelium** is derived from the

primitive lining of the blastoderm (mesoderm) stomata on openings connect the internal surface of these membranes with the lymph channels; these membranes line the pleural, pericardial and peritoneal cavities.

Endothelial cells (menenchymal) are found lining the blood vessels, lymph vessels, (arachnoidal and synovial spaces, ant. chamber eye, bursa, and tendon sheaths, these being lymph spaces).

Having now not only met each member but studied the history and detail of each we will commence, and for a few moments endeavor to put the puzzle together.

We will take it for granted that our rough carpenters have preceded us and already have the joists (bones), stays (ligaments) and sheeting supports (connective tissue) up and waiting. We will first put on a good layer of weather boards and shingles and from the ectoderm we will take a section of stratified squamous epithelium and cover him from head to foot and more, to make a good job we will continue it into the openings of cavities, mouth, ear, eye, nose, vagina, etc., etc., making the entire walls of the oral cavity of this variety.

Stepping into the reception room we find the portals guarded by white members who owe their pearly whiteness to the outer layer of the blastoderm; here we also find a hinged member given great latitude as to motion; passing on down we notice at the cardiac end of the kitchen that we find simple columnar epithelium (this is derived from the entoderm) and continues as such to the





anus, on the way it passes off and lines some of the substations—liver, pancreas, kidney, etc., starting at the nose or second story entrance of our house we find ciliated columnar stratified leading us down into the larynx (except the epithelium of the arytenoid cartilages the free margins of the epiglottis and true vocal cords, this being stratified squamous), bronchi and now into the bronchiole we find that our membrane consists of but one layer of epithelium but still ciliated the gradation continues; cilia are now found only in patches, and when we get to the end of our tour of inspection we find a squamous variety (some non-nucleated). The ectoderm is responsible for the nervous system, both central and peripheral, also forms almost the entire eye.

Let us make a tour of one of the systems of sewage commencing at the percolator or strainer, in the cortex of the kidney we find pavement epithelium gradually becoming cubic in the neck, passing down we find in the proximal convoluted tubule short columnar epithelium, as the size of the tube differs we find cells to suit, viz., descending limb squamous, loop and ascending limb, short columnar, as also the distal convoluted tubule.

Cubic epithelium reigns in the arched collecting portion giving way a few steps farther to short columnar in the straight collecting tubule, becoming higher in the larger tubes (caused by the merging of smaller tubules). The renal pelvis, ureters and bladder are lined by Stratified transitional epithelium while a similar variety lines the prostatic portion of the urethra,

becoming pseudo-stratified in the membranous portion, this also extends through the cavernous portion to the fossa navicularis where it becomes stratified squamous continuous with that covering the glans penis. We now survey our man and find that the epithelial tissues make up a great portion of his figure, at least in expanse, if not otherwise.

It would not be fair to stop at this point, however we have got a view as to how we appear under the microscope, and it has been fulfilled to us, "Oh, would some power, etc., etc." But the histogenesis of our epithelial tissues can be traced a little farther back if we will now consider for a few minutes the covering of the female genitals internal and external.

Commencing at the Ostium vagina we find the stratified squamous continued in from the surface of the body; the cervix marks the beginning of the reign of ciliated columnar which also lined the cavity of the body and the lumen of all glands in connection therewith (In Multiparæ Stratified Squamous may extend in the cervical canal).

Simple ciliated columnar cells line the overducts of the fallopian tubes. The junction of the mesothelium and epithelium at the fimbriated extremity is the only place where serous and a mucous surface meet.

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Every wound in which the bones of the skull are affected through penetration from outside is a compound fracture, as far as its dangers are concerned, and must be treated with the same extreme carefulness as compound fractures elsewhere.



## Beautiful, Attractive and Healthful Summer Resorts of Northern California.

DR. W. F. GATES, ORIVILLE, CAL.

NOT wishing to monopolize all the good things nor secrete a candle under the bushel, I take this opportunity to bring before the many readers of your valued Journal, not only in this State but to its many readers throughout its wide circulation, the fact that Northern California possesses many beautiful and attractive, as well as healthful, summer resorts. In fact some of the grandest scenery to be found anywhere is found here. Some is truly interesting and enchanting.

\* In northern and eastern Yuba County we have Brownsville, Strawberry Valley and Woodleaf. In Butte County, of which Oroville is the county seat and the beautiful city of Chico is its largest city, there are many beautiful summer resorts, all of which have their varied attractions and are visited throughout the summer months. Among them are Hurleton, Enterprise, Mooretown, Lumpkin, Cascade and Fall River. Fall River is one of California's noted beauties. It has the grandest fall in California, if not in the United States, 452 feet perpendicular.

Then there is Yankee Hill, the famous Deadwood, Con Cow, Flea Valley, Berry Creek, Mountain House, Merri-mac, Magalia, Lovelock, Powelltown, Reservoir, and the Butte Creek House, where there is plenty of trout fishing, and where deer, bear, California lion, grouse, and quail are found.

These resorts are accessible from Oroville and Chico by stage and private conveyance.

In Plumas County, of which Quincy is the county seat, and where live the most genial, hospitable kind-hearted people in the State, we have the most varied, beautiful, interesting, in fact the grandest and most attractive summer resorts in all the great State of California; and I candidly believe the time is not far distant when they will be the noted summer resorts of the Pacific Coast. Here there are a vast number of mineral springs, noted far and wide for their medicinal virtues, as in Humbug and in Hot Spring Valley, where thousands of people go every summer to drink these waters for relief of rheumatic and kidney troubles. The famous Natural Ice Cave is truly a marvel. The renowned Hot Springs, where thousands go annually to take the hot water baths and view the bottom of the old crater, commonly known as the Devil's Kitchen, where thousands of boiling and spouting pot holes and springs covering about sixty acres of land with a clear cold mountain stream running through the entire distance, is a special attraction. Here my friends, you will look and wonder in amazement. This, I believe, is destined to become one of the most noted health resorts on the Pacific Coast.

From here you can go on horseback



to the great Lassen Butte. The majestic grandeur of which I will not attempt to describe. Suffice it to say that both men and women have succeeded in reaching the top, while thousands have tried but in vain. Then from Hot Springs you can go on horseback to Cinder Cone, claimed to be the latest volcanic eruption in the United States, and which is fully worth any one's time to go and see.

Then there is the Boiling Lake, of some twenty acres, which is marvelous, which are also the geisers, spouting, boiling water from ten to twenty feet in the air. Then there is the beautiful Willow Lake.

Throughout and surrounding all these wonders of nature, fish and game are plentiful, and hundreds of people recount hot springs and its surrounding country as their first and most satisfactory place of experience in capturing the deer, bear and mountain lion. We have the wonderful Big Meadows and Big Springs, where thousands of people congregate every summer and fish; and I want to tell you right here that a grander fishing place can not be found than at Big Meadows and Big Springs.

Here is where you can catch trout from a half pound to four and five and even eight pounds, and fully enjoy all the variations connected with this delightful sport, and where many of you professional casters will be surprized to find the number of fine fisher men way out here. The accommodations are ample and abundant, and the people living here are good and kind to a fault.

But the most beautiful and picturesque scenery is along the fine mountain grade from Greenville, past Crescent and Shoo Fly to Quincy. It was my good fortune to travel over this grade in the evening, and with the reflection of the setting sun upon the grand old pines, the autumn leaves, the lofty mountains with the river wending its way along the foot of the canyon, it was the grandest view my eyes ever beheld.

Hot Spring Valley is, I believe, the key note to one of the greatest sanitary locations on the coast, being the starting point for so many points of interest.

Any inquiries concerning any of these different points of interest would be gladly furnished on application.

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## Treatment of Fractures of the Base of the Skull and Some Remarks Concerning the Method of Operating.

CAPTAIN ROBERT EDDY BELL, LOWELL, MASS.

Commandant of the Ambulance Corps of the Massachusetts Volunteer Militia; Surgeon to St. John Hospital, and to the Lowell General Hospital.

**F**RACTURES involving the floor of the anterior and middle fossa and the pyogenic diseases of the brain in these regions resulting from infection have been, and are attracting, the earnest attention of our surgeons.



Unlike the surgery of the abdominal cavity where the technique and indications for operative procedure are about perfect, much yet remains to be said and done concerning the surgery of the base of the skull.

In 1883 a very famous neurologist stated that it was useless to attempt to operate on the brain for abscess. One of the most eminent surgeons in London declared not twenty years ago, that a man would not see a case of abscess of the brain once in a lifetime. The condition of the surgery of fractures involving the floor of the fossæ was in the same uncertain condition. I do not expect that anything I may say will interest the specialists in cerebral surgery, or the aural surgeon trained to deal with the numerous pyogenic infections of the brain. I will endeavor to report briefly a few cases which possess some points of interest to us as general surgeons.

Case No. 1, while it did not probably involve the floor of the anterior fossa, had some of the symptoms, so I speak of it.

This man was struck by a heavy derrick falling and hitting him on the head. The derrick was a very large one used in lifting stone. When I saw him about one hour after the injury he was unconscious, but could be aroused somewhat by attempting to touch the depressed bone. Pupils reacted, although sluggish; reflexes not abolished. There was a compound depressed fracture along the course of the superior longitudinal sinus, a piece of bone about three inches long being driven into the sinus. Upon removing the

bone there was of course a tremendous flow of blood, for which I had prepared myself by having a strip of gauze about three yards long and one inch wide, which I crowded into the sinus, layer upon layer, until the flow stopped. At the end of a week I began to gently coax out the gauze. At the end of two weeks it was all out and the patient went home. There have been none of the later mental derangements. The points of interest to me in this case are:

First. This man received the hardest blow, and yet made the most speedy and complete recovery. He has not developed any of the mental disturbances that have darkened the lives of some of the others. Dirt, sand and hair were driven into the wound, yet by thorough cleansing and shaving before attempting to elevate the depressed portion, there was not the slightest evidence of suppuration. By using gauze enough and persistently crowding it into the sinus, there was not the least difficulty in stopping the flow of blood. I do not think that most of the text books are quite clear enough on this point.

Case No. 2. The second case was probably one of fracture through the anterior fossa. Of course we all recognize difficulties of diagnosing fractures of the base. Dr. Cheever says: "Fractures of the base are difficult to diagnose because we cannot see anything, cannot trace anything, cannot feel anything. The injury is where we cannot trace our fractured bone or be guided by ordinary signs, and can only infer any reason from the symptoms."



This boy was kicked by a horse; there was sharp hemorrhage from the nose, also hemorrhage into the conjunctiva. His head and face were covered with blood and sand; was unconscious and remained so for about six hours, after which he could be aroused; he remained more or less dazed for twenty-four hours, breathing stertorous; pupils dilated and very sluggish; respiration 16. Dirt and hair were ground into the wound. The crack was directly over the situation of the frontal sinus. I thought it best to enlarge this crack and investigate. I found the sinus filled with brain tissue and blood clot. I thoroughly cleansed the sinus and drained, but not as in empyema of the sinus through the nose, for it seems to me rather better in these cases to let the inside of the nostrils pretty well alone. If we attempt to cleanse and spray I fear we may add to the danger of infection. Although there was no depression of the bone in this case, I think by not waiting for symptoms pointing to some pyogenic infection and then opening the sinus, but by opening it up at once I may have saved this boy some trouble. At any rate he made a very quick and uninterrupted recovery, but about six months after he began to show some signs of moral depravity, which took the form of lying, and stealing from his parents.

Case No. 3. In the third case involving the middle fossa the man fell a distance of eight or ten feet striking upon the left side of his head and face. There was blood in the mouth and throat. He was pulling on a bale of goods, which falling upon him, of course

caused him to strike with much more force. Pulse was 90; pupils unequal, right somewhat dilated. Pupils reacted very slightly. Found some brain tissue in left ear; some blood in nose and throat. There was an escape of cerebro spinal fluid and brain tissue from the ear. Of course we know that blood and the escape of fluid from the ear are not the sure signs of fracture of the middle fossa, but a discharge of cerebro spinal fluid for some little time together with other symptoms is a pretty sure sign that we have a fracture through the petrous portion of the temporal bone. We know that blood may come from the ear if the tympanic membrane is ruptured, or if there be tearing of the soft parts of the tympanic cavity, or if the skin of the external auditory canal be torn. Also blood may come from the fracture of the tympanic plate of the external auditory canal which forms the posterior wall of the articulating fossa of the jaw. In both cases where the fracture seemed to involve the middle fossa I commenced as though I were going to do a regular mastoid operation, only I laid bare a larger surface of bone than I would ordinarily have done for this operation alone, making a flap as recommended by Dr. Dench.

My reason for not simply trephining through the thin plate of the temporal bone and thus reaching the floor of the middle fossa was that these fractures are apparently along the upper surface of the petrous portion of the temporal bone through the roof of the tympanum and the osseous part of the external auditory canal, and as Dr. Barr states,



most of these cases will have developed later purulent process of the middle ear. I think it better to do the mastoid operation at once taking away the roof of the tympanum which gives us direct drainage as we reach the most dependent part of the floor of the middle fossa. One may, of course, use the trephine to reach the floor of the middle fossa, but I prefer doing it as I have suggested. I found a clot of blood and broken down cerebral tissue along the floor of the fossa. I removed this blood and broken down tissue very carefully and drained with narrow wicks of sterile gauze.

This man made a good recovery, but has since developed some peculiar traits; he cannot be called insane, but he is certainly eccentric. He is able, and does work every day.

In operating on the skull and especially in region the of the mastoid, most of the text books recommend the mallet, chisel, trephine and burr. Sir William Macewen recommends the gouge and burr, but condemns the chisel and mallet most emphatically. In my operations in this region, which (it is true) number only about 50 on the living subjects, I have never used anything but the gouge; I have yet to strike the first blow with the mallet in doing the mastoid operation. With a short, stout gouge or chisel, with an expansion on the handle that rests against the palm of the hand, one may go through the hardest mastoid without difficulty, and without danger of wounding the sigmoid sinus or the delicate structures inclosed in the cavities; by simply shaving off the bone and looking, after each

piece is detached, you can lay bare the wall of the lateral sinus without any danger of wounding the sinus. I do not use the burr, yet this instrument, as recommended by Sir William Macewen of Glasgow must be of great assistance. Although the directions for reaching the mastoid antrum with the trephine are very carefully figured out in most of the text books, I think the men who have done much operating in this region will agree that the distance between the lateral sinus and the bony wall of the meatus varies greatly, as also does the depth both of the sinus and antrum from the outer wall. I do not like the mallet because it cannot do the already congested brain any good to receive the number of successive jars that must result from its repeated blows.

Formerly, following the lead of European surgeons, most of our surgeons considered that all operations of the skull should be done rapidly in order to lessen the great mortality. Dr. Powell, who has done a great amount of work along these lines says, "I do not see why the skull cavity cannot be invaded with as little danger as the abdominal cavity, provided the contents of that cavity were protected from injury." In other words, it occurred to him that the mortality must be attributed to the method of operating, and not to the length of time occupied. In these cases of fracture of the base the patient has but a narrow margin, this margin being so narrow it might be possible for us to cause just a little more traumatism no matter how delicate our blows might be. This objection



to the use of the chisel and mallet applies more forcibly when we operate for some of the septic conditions which are so apt to follow as a result of fracture of the base where communication has been established with the cavities of the nose and ear. In these cases there must be congestion of the cerebral tissues, and any additional jarring must be injurious. In looking up the treatment of the fractures of the base I find that most works on Surgery are disposed to advise us to treat them symptomatically. One of the recent text books states that the treatment of the fractures of the base is symptomatic. As one of the principal dangers of such fractures is infection from the ear and nose, the ear should be thoroughly wiped out with moist cotton, and the parts examined with the speculum. No irrigation should be employed because of the possibility of carrying infection into the fissures. The canal should be carefully stuffed with iodoform gauze or sterilized cotton. The nose should be cleansed by a spray and with moist cotton. Punctured fractures of the orbit must be thoroughly explored, the soft parts being incised and the orbital ridge trephined of a necessity, to gain access to the base of the brain.

I do not think these fractures of the base, especially those of the middle fossa, where we have an escape of brain tissue from the meatus together with cerebro spinal fluid or of cerebro spinal fluid alone should be treated symptomatically. I think all of these cases should be operated upon, either by trephining through the thin plate of the temporal bone and thus gaining access

to the floor of the middle fossa and removing the blood clots and brain tissue and establishing drainage or by operating, as I prefer, by opening the mastoid region, taking away the roof of the tympanum, going into the mastoid antrum, then washing thoroughly from within, out, so that the possibility of carrying any infection by attempting to cleanse the ear through the external canal is avoided. The effect of quantities of hot saline solution upon the cerebral tissue is beneficial in restoring the activity of the respiratory system. The day of ice bags in grave injuries to the skull is past.

In these serious injuries where apparently there is a fracture along the floor of the anterior or middle fossa we give the patient the best chance of recovery if we operate. During my earlier hospital experience these cases were allowed to go without interference; practically all the works on surgery admit that the prognosis is grave, but do not give the student much encouragement or definite instruction about operating. It is true many of these cases recover without operation, but more of them die.

It would seem to me that in all these cases of fracture, unless we have some rather positive indications that we will hasten death by interference, that we should resort to artificial respiration, open up the skull, determining by the the symptoms as well as we can the seat of the lesion, stop hemorrhage, remove all blood clots, establish drainage and irrigate with plenty of hot saline solution.—*Journal of the Association of Military Surgeons.*



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# SOUTHERN CALIFORNIA DEPARTMENT

EDITED BY

O. C. WELBOURN, M. D.

303 GRANT BUILDING, LOS ANGELES, CALIFORNIA.

## EDITORIALS.

Dr. M. S. Aisbitt entertained the Los Angeles County Eclectic Medical Society at his residence on April 2nd. The Society had the pleasure of listening to a paper by Dr. Aisbitt on Sanity and Insanity. It was well received, and as usual the discussion following was spirited and thorough. A delightful luncheon was one of the features of the evening. All those who were so unfortunate as to be absent missed a good thing.

The Southern California Eclectic Medical Association will hold an all day session on May the 4th at Hotel Westminster, Los Angeles. This is the Annual Meeting of the Association and all members and friends will re-

ceive a hearty welcome. There will be interesting papers and discussions and a general good time is assured.

## QUERY BOX.

Conducted by L. A. Perce, M. D., Long Beach, Cal.

What unpleasant conditions have you found from the use of serum?

I have never found any unpleasant conditions arising from serum treatment other than a circumscribed or general erythema, which may be quite distressing for a few days, but which will gradually pass off. Also one may expect a general rheumatic manifestation where such a tendency exists, with high temperature and general uneasiness. While these conditions may arise, it is by no means likely that all



cases will be thus affected; nor that all cases will be affected alike. One in using either antitoxin or the antistreptococcic serum should look carefully after the condition of the patient, to notice as soon as possible any indication of such results. I have found, after using the serum, that in from ten days to two weeks a rose-red rash presents itself near the point of infection, spreading gradually, and in some cases becoming general. Do not hastily diagnose this as erysipelas; it is not, but will, in some of the remote parts, closely resemble measles. I have even seen some œdema of the glottis, accompanying the eruption on the mucous membrane covering that organ, which may mislead one to conclude that the patient has a very severe throat. I have great confidence in serum therapy, when properly administered, as I have proven beyond question its efficacy in a number of cases.

#### **Ocular Affections in Relation to Diseases of the Respiratory Tract.**

Marshall B. Ketchum, M. D., Phar. D., Los Angeles.

There are many cases of chronic inflammatory conditions of the conjunctiva, that in the hands of a good many practitioners seem to resist every form of treatment adopted, until they are often declared incurable and are left to shift for themselves until—if they ever do—they come under the care of a more competent physician with a better and deeper knowledge of the etiology of such conditions. My experience has taught me to regard every inflammatory condition in and about the eye as wor-

thy the most serious and careful attention; and I write particularly in reference to a few important points in regard to "sore eyes" that are in a general way often, unthought of or overlooked.

Both acute and chronic catarrhal affections of the whole respiratory tract must be taken into consideration when a patient presents himself for treatment for any of the various forms of conjunctival inflammation. Time and again have I had them come in to tell me the old story of how this doctor and that doctor had been giving them a "course of treatment" for some time without other than temporary benefit, and would want to know if a cure were really possible. Right then would I have some new information on the subject to impart to my prospective patient and their surprise would be great when I would invite them into the dark room and proceed to give them a careful examination of their nose and throat; as, knowing that the extension of chronic rhinitis up to the nasal duct is so often a cause of persistent conjunctivitis, I would feel quite confident of finding the seat of the trouble there, and with anything like a chronic history of the eye affection my examination of the respiratory tract would be almost sure to reveal it. The new information to the patient being the fact that the direct cause of the diseased eyes had been overlooked and that only after a thorough treatment of the nose and throat could I promise them the cure they sought after, proper constitutional treatment also having full consideration.

No doubt but every reader of this



paper can recall to mind from among his patients of the younger class, a few who had weak eyes, photophobia being a very persistent feature; the eyes aching or getting tired after reading for a little while; though having good light it seemed almost impossible to use the eyes in any form of close work at night, and so on. Of course refractive errors must always be considered in almost all phases of abnormal conjunctival conditions of the chronic form; but aside from that, in those children you will always find either adenoids, enlarged tonsils, or some form of hypertrophy of the nasal mucous membrane that is at the bottom of the whole thing. Besides the external eye manifestations we sometimes find an intimate relation between certain forms of rhinitis and choroiditis, and I am positively certain that asthenopia, or weakness of the accommodative powers of the eye, is often directly traceable to nose affections, especially those of the atrophic forms. Herpes on the cornea is another condition sometimes produced, and which often leads to great impairment of vision.

Other conditions might also be mentioned, but enough has been said to show that other than mere local applications to the eye are necessary in the majority of chronic cases to effect a good and perfect cure.

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#### **Superheated Dry Air.**

A. P. Baird, M. D., Los Angeles, Cal.

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The use of heat in medicine is as old as history. Who is not familiar with the adage "Heat is life and cold is

death?" But withal, like most powerful agents for good, it is also for evil; for that reason perhaps, this great energy has been little used in medicine. Another very potent reason is, it is very hard to write a prescription for a certain amount of a certain kind of heat to be applied in a certain way to certain parts, and a very hard prescription to get filled. The fact is the doctor himself must fill the prescription, and as this is both a laborious and a slow undertaking, most of us shrink from its fulfilment; but the results in some cases are immense, and will repay all the toil, that is if results are counted as pay.

The kind of heat this short paper is intended to call your attention to is the dry form, applied to any part of the anatomy, or to the whole body at once.

There are various kinds of apparatus used for the purpose, according to the case to be treated. First is the body apparatus, into which the patient is wheeled on a flat car running on steel rails, very easy of manipulation, entering the machine feet first leaving the head out or even more if deemed advisable. The temperature is raised by degrees until it reaches from 250 deg. to 400 deg. F., as your judgment may think the case demands, keeping the patient in from 15 to 60 minutes. They must then be well rubbed down and dehydrated, allowed to rest if they wish, and there need be little fear of their taking cold.

Then there is the small apparatus for the application of heat to any limb or part, and lastly the apparatus for the ears, by which one or both ears can be treated.



The principal diseases to which dry heat is applicable are rheumatic affections of all kinds, especially chronic cases that have baffled the skill of the physician so far as drug exhibition is concerned; joint diseases, whether tubercular, septic or simple traumatic, especially where there is great limitation of motion consequent upon shrinkage of ligaments and tendons; peritonitis; pain of all kinds; obesity; skin diseases; nephritis, acute and chronic; occlusion of bile duct; neuralgias; otitis media, acute or chronic.

Now for a few cases that will serve to illustrate the uses of hot air. Mrs. W., aged about 40, had a most severe case of sciatica, affecting the sciaticus magnus about its exit. Fifteen minutes after placing her in the apparatus, she exclaimed she felt as if she were in heaven. She was free from pain, something she never knew for months; so intense was her suffering that she could not ride in a rubber tired buggy without crying out for pain when crossing the street car tracks. She required 28 treatments, extending over a period of three months, when she could walk where she pleased without pain.

Case No. 2. Dr. F. telephoned me one morning inquiring when he could come to my office as he had not slept all the previous night, notwithstanding he had done all he knew to remove a rheumatic pain in his right shoulder. I had him come over at once, and applied a temperature of 550 deg. F. to the affected place, and he had no pain from first treatment. Next morning it was in his left shoulder, a temperature

of 400 deg. F. fixed that; he had no more.

Case No. 3. Mrs. B., general peritonitis; little hope of recovery; called in Dr. H., in consultation; he gave no encouragement; determined to try hot air; had small apparatus sent up, used it three times a day; improvement from first treatment, second day considered her out of danger.

Case No. 4. R. E., a youth of fifteen years had an attack of otitis media, both ears discharging pus; could not hear my watch tick one inch from his ears; pain severe. Five treatments restored hearing to normal; first treatment dissipated pain.

There are many others I might cite here, but, however, these are sufficient to show the marvelous effects for good there is stored up in heat properly applied.

The question may be asked, in what way does intense heat relieve and cure the above mentioned diseases? In the first place, we all know that intense dry heat is the most powerful germicide known. There is absolutely nothing to compare with it. The Scriptures say fire (heat) purifies all things. Now if we can only communicate enough heat to diseased processes, and at the same time protect good tissue, there can be but one outcome, the riddance of the enemy. Here is a large field for ingenious thought to operate on, viz: the proper protection of your friends while effectively directing your fire on the enemy. No doubt this is the great obstacle to be overcome, and in a limited measure, is overcome now.

Then, again, it acts not as a direct



germicide, but indirectly by compelling the secretory and excretory organs to be profoundly excited to action, thus quickly throwing off the exciting cause of pain and disease. There is, I doubt not, no agent that so quickly and thoroughly dissipates congestions as intense heat.

Again, heat moderately applied is a very effective means of calling blood back to any depleted part of the anatomy, so we warm our feet and hands when cold, or in other words, anemic.

This paper is by no means intended to convey the idea that heat is going to take the place of drugs entirely. I know of no one who has more confidence in drug action than myself; but I do mean that, like electricity and other much unknown quantities, it is, in the hands of the intelligent physician, a mighty help in alleviating and curing diseases, the great curse of mankind, the result of departure from God and his physiological laws; and that it will become the nobility of the profession to augment their forces against disease, by strengthening their armamentarium in every way consistent with their lawful means, in order to the making of a better fight against the forces of evil continually besetting humanity, even if we are poorly paid for our time, trouble and expense, while we see the medical faker prospering on every hand, he with a fat purse and bad conscience (if he has any left), and we with a lean purse and good conscience. We also may hear the melodious notes of gratitude evoked from a soul filled with gratitude in words similar to the poet's who wrote:

"Thank God for the doctor!" the layman cried,

As he watched him with bated breath,  
And saw the physician with skillful touch  
Save the one that he loved from death.

"Thank God for the doctor," he humbly moaned,

"Every hour of my life I owe  
To him who has saved me this life today,  
Saved the home from its grief and woe."  
There were honest tears in the layman's eyes,

As he held in a vice-like grip  
The doctor's hand that was thin and cold,  
And pressed it with fervent lip.

What a lovely thing is this gratitude;  
How sweet the reward we gain  
For the labor we do for the sick and weak,  
Our labor of hand and brain.  
What a wealth we have for our daily work,  
For those who are sad and ill.  
How sweet to the ear is the grateful word,  
Until we present the bill.

Read before the Los Angeles County Eclectic Medical Society.

### Convulsions.

W. S. Gibson, M. D., Los Angeles, Cal.

Convulsion is not a disease, it is a condition and one which we are frequently called upon to relieve without knowing the cause. To relieve the condition and at the same time keep the family and friends quiet often requires skilful generalship; to show the least hesitancy is fatal—not to the patient, but to the doctor.

In this article we confine our remarks to the spasms attending the various ills of childhood. The causes giving rise to these conditions are many. Convulsions may denote lesions of nerve centers or uremia, or they may be the



forerunner of a general systemic disturbance. They may arise from dentition or irritation of the alimentary tract from a variety of causes. The latter condition is the most frequent cause of convulsions in children up to the age of six or eight years. The nervous system of the child is in a state of active development and is extremely sensitive to impressions that would be trivial in an older person.

Spinal development is more active than brain development, consequently there is a lack of controlling power and more chance of reflex movements from slight causes. In older children, when suddenly attacked with convulsions without appreciable cause, we think of epilepsy or some other lesion of the nerve center itself.

The eruptive fevers are often ushered in with a convulsion which does not materially affect the prognosis, but if occurring during or at the end of the disease is serious. Scarlet fever, be it ever so slight, may be followed by a convulsion indicating a grave disorder of the kidneys.

Convulsions will vary from a slight twitching of a few groups of muscles to a general contraction of all the muscles of the body. The patient may be sensible, partly sensible, or in a condition of complete coma. The abnormal condition producing the spasm may be known or it may not; the character of the spasm will not enlighten us, although some information may be gleaned from such an observation. In susceptible children, almost any disorder may be attended with convulsions.

When called to attend a child in

convulsions, we are expected to at once proceed to business, and usually a certain routine may be followed until the spasm has passed. The patient may be immersed in a warm mustard bath or a pack can be used; apply cold water to head in most cases. If the temperature is high, use a cool enema, if low, use warm salt enema. An injection of chloral, about 4 grains for a six months child, can be given. Chloroform, ether or nit. amyl can be used. Should there be relapse, give strychnia and glonoin. If an emetic is needed, use ipecac or apomorphia. Administer a laxative as soon as patient can be induced to swallow, and the best is calomel in trituration gr. 1-10, repeated every thirty minutes. As soon as the convulsion has passed, a careful examination should be made to ascertain the cause and remove it; make inquiry as to past history of the patient, especially as regards diet.

The worst convulsion the writer ever saw in a child was due to paraphimosis; chloroform was used to relieve the spasm, and at the same time the constricting band was divided.

In the after treatment of the case, the good eclectic will follow indications and seldom go wrong. Look carefully after the diet and hygienic surroundings.

Gelsemium and hyoscine hydrobromate are excellent to prevent a recurrence of the spasms.

Where there is a toxic condition of bowels, give arsenite of copper.

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The sturdy druggist does not always wink his eye in the doctor's favor. The American dollar has too much silver in it.



# **SUCCESS**

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is one of the best proofs of merit, for no matter what it is, whether it be a medicine, a typewriter or piano, it *must* have *merit* to succeed. Advertising and pushing may make it go for awhile, but without *merit* it will surely fail. Therefore, we think that the fact that we are moving our business from St. Louis to New York in order to have better facilities for handling it, to be nearer the source of supply for the various ingredients that enter in their composition, and to be nearer and more in touch with our foreign business, which has assumed large proportions, is one of the best proofs that can be offered as to their merits; and the fact that Celerina as a nerve tonic, Aletris Cordial as a uterine tonic, and S. H. Kennedy's Pinus Canadensis as a vegetable astringent, have stood the severest test of time from the medical profession all over the world, proves that they *must* be what we claim for them. And right here we want to tender our sincere thanks to the medical profession for the support and confidence that they have given us in our endeavor to present to them preparations of absolute strength, purity and uniformity.

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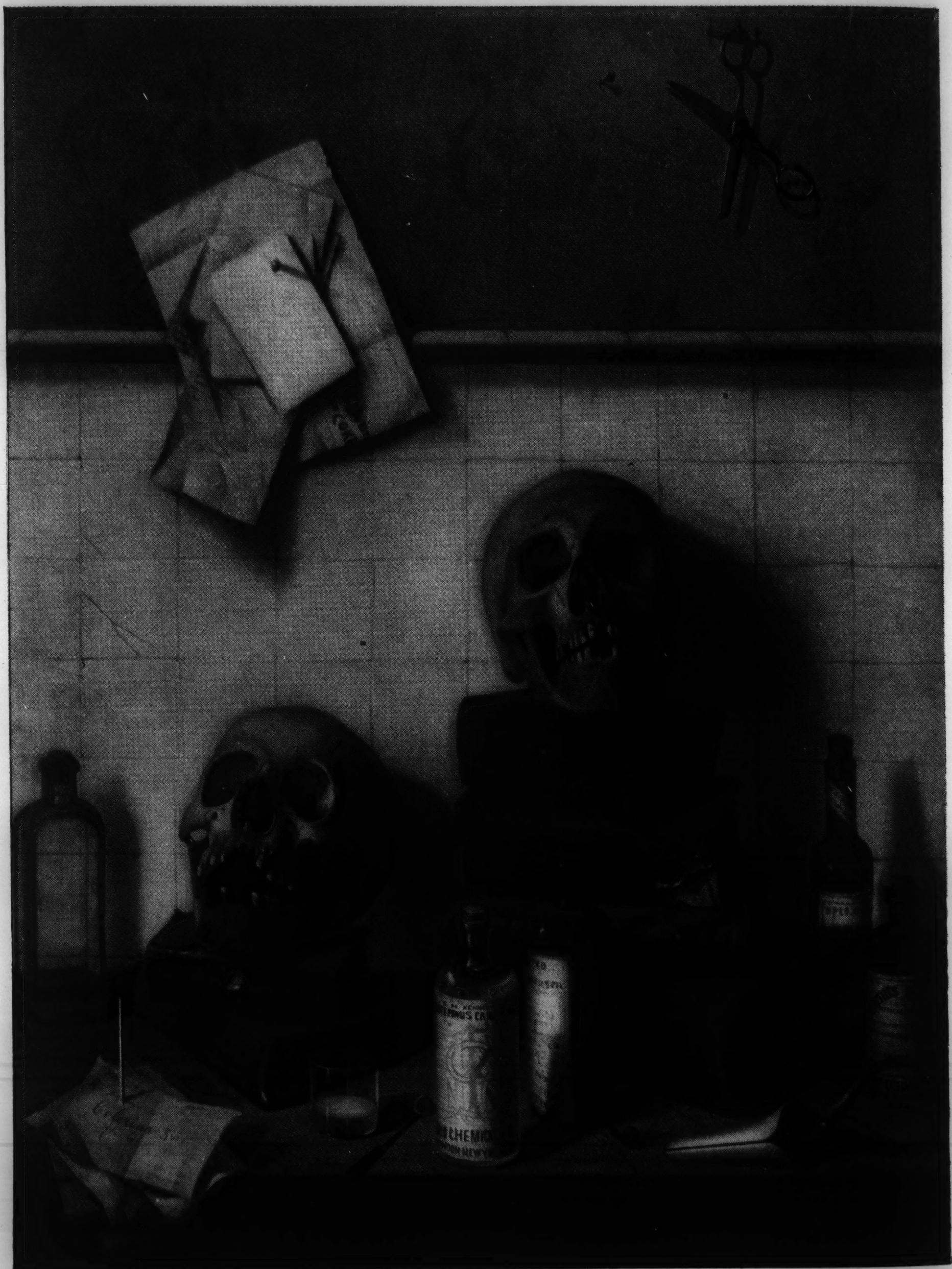
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AN OLD DOCTOR'S STUDY.



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## *Editorial.*

### Emergency Hospitals.

These institutions are the outgrowth of advanced civilization. They show the brotherly humanitarian side of man. The tender side, which provides care and attention for the unfortunate. True, the care may not always be the best, if the newspapers are to be relied on. Constant criticism and charges of incompetence, and worse, are brought against our Central Hospital. There may be some truth in the matter, we believe there is, but it is the same old story, with the change of each administration. The Emergency Surgeons do a great amount of work, and good work, which is never told in the press, but the few mistakes are heralded far and

near. The story of grafting and soliciting business is a common tale. It has been done since the organization of these hospitals and will be continued, we have no doubt, in the future.

There is one thing, however, which should be changed. Our Central Hospital should be a model of neatness and cleanliness. It is far from it. Any one is liable to accident and to be carried within its doors in emergency. Our citizens and taxpayers are entitled to the best.

The chief surgeon should have such salary as would command the services of a good and competent man. I consider his position the most important in the city. His services should be worth as much as the judge on the bench. Then there would be no necessity for taking questionable fees, and the public would receive the attention they demand.



### State Tubercular Sanatorium.

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It is claimed that in this country *three* persons die every minute of tuberculosis, or over 3000 persons a day. In this State the deathrate is about 3000 a year. This is a large percentage for our population. In San Francisco for the last month we had 89 deaths and Los Angeles 66.

Tuberculosis is not an incurable disease in its first stages. With the proper care and favorable environments nearly every case can be restored to health and usefulness.

The establishment of State Sanatoria would be a great step in checking the disease. Persons in the early stages could come under the control of the State much to their own benefit and immeasurably to the public good.

Rigid hygiene could be established and each patient could be made to understand wherein the danger of infection lies, and in which direction lies his best hope of cure.

Outdoor life, proper food, proper breathing, proper sanitary regulations will work wonders with the incipient cure, and will remove a source of infection from the community at large.

There are many sanatoria throughout the country that are doing a great work. In these there is one regulation enforced—a patient who expectorates except into the proper receptacle is expelled.

In State sanatoria such a patient could be dealt with by isolation or otherwise, until he had learned his lesson. For a consumptive who realizes his state and lives up to the

proper rules ceases to be such a public menace.

If the tuberculous could be committed to sanatoria like the insane, there would be a speedy lessening of the present appalling death rate.

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### Editorial Notes.

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Dr. Noble of Seattle has been ill.

The Washington State Society meets at Tacoma, September 16th.

There is a good opening for an Eclectic at Monroe, Wash.

Dr. M. L. Doom, of Tacoma, expects to retire from practice in the fall.

The illness of Dr. F. T. Lamb is causing his many friends much anxiety.

Dr. Law Keem of Fresno is in New York for a Post graduate course.

Dr. and Mrs. Perce, of Long Beach, have been in town during the month.

Dr. A. J. Atkins has kindly donated chairs for the clinic waiting room at the California Medical College.

Office to let, from 10 a. m. to 3 p. m., daily, with use of static machine. J. Stark, M. D., 216 Eddy Street, S. F., or 1410 Eighth St., Oakland.

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JUST AS GOOD.—“Dearest,” asked the confiding girl, “am I really your first and only love?”

“No, darling,” said the young druggist, “but you are something just as good.”



**SOCIETIES.**

The California State Eclectic Medical Society will hold its annual convention on May 24th, 25th, and 26th at the Hotel Westminster, Los Angeles. All members are, of course, expected to be present, and non-members are most most cordially invited. A number of representative men from the East have promised to add to the pleasure of the convention by being with us at this time. A good programme is being prepared and there will be interesting clinics every morning at the Deaconess Hospital. The Southern California association has planned to entertain the society on Wednesday afternoon. Whatever it undertakes is a success, and we promise that this will be no exception to the rule. You can anticipate something out of the ordinary. Everything is being done to make this the best state convention California ever saw.

Come out and greet old friends and welcome the strangers within our gates. O. C. WELBOURN, M. D.,  
President.

**MEETING OF THE STATE SOCIETY**

*Los Angeles, May 24, 25, 26, 1904.*

DOCTOR—Why not take a vacation and go to Los Angeles and at the same time attend the meeting of the State Society? We have made arrangements with the different railroads going to that city for special rates, whereby it will cost only one and one-third fare and you can purchase your ticket 15 days before the convening of the meeting, but will have to reach your destination on the

29th; therefore if you desire to spend very much time in the south, it will be necessary for you to go before the time set for the meeting as the 29th will be the limit of the special rate.

The Committee of Arrangements have secured the Parlors on the second floor of the Westminster Hotel as Headquarters for the Society and nothing will be spared by those in charge to make your stay in the Orange city a most pleasant one.

There will be several visitors from the East in attendance among them Dr. Geo. W. Boskowitz, of New York, Dr. F. L. Wilmeth, First Vice-President of the National Association, and probably John Uri Lloyd, of Cincinnati, and possibly others who could not state definitely when replying to the invitation extended to them.

The Program will be very interesting and will consist of a large number of well written papers, and there will be held in the German Deaconess Hospital a Clinic for the special benefit of those in attendance at the meeting. This meeting is so arranged that it will be of great instructive benefit to all.

Wednesday afternoon has been set apart, at the request of the Southern California Eclectic Medical Association, for the purpose of being their guest, which we will surely appreciate very much.

In purchasing your ticket you will be required to pay one first class fare and be sure to request the Agent to give you a *Receipt Certificate* which will entitle you to obtain your return ticket at one-third of the regular fare—return ticket is for continuous passage.



Over 100 have already signified their intention of being present and the outlook is favorable for the largest meeting ever held in the history of the society.

We hope that you will be with us.

Most fraternally,

BEN STETSON, M. D.,  
Secretary.

O. C. WELBOURN, M. D.,  
President.

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#### The National.

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A political party, a religious denomination, or a medical school is strong just in proportion to its organization. There must, of course, be great principles back of the organization, yet principles alone make but poor headway in this active, bustling age. Eclecticism has done a great work in the past seventy-five years, and the medical world is vastly richer for her work, and yet her mission is just as important to-day as it was when Wooster Beach first began his work for a better system of medication. Her mission to-day is to give to the world the practical application of her splendid Therapy. Much is being said about a union of all schools, and a few of our own school, without giving the subject much thought, have advocated the same measures. A careful study of the present day medication, however, must convince any thoughtful person that the mission of Eclecticism has but fairly begun. The increased mortality in the two most prevalent diseases of our country under regular treatment is

most convincing argument for the perpetuation of Eclecticism.

The Need for Organization.—In order that the school secure the best efforts from her host of workers, it is necessary for a more perfect organization. Ten thousand Eclectics and only 5% members of the National Eclectic Medical Association and less than 25% members of the various state societies.

Surely we can never take the position that rightfully belongs to us nor do the work that we are capable of doing with an organized membership of 5% of our followers. No Eclectic that practices the system or loves liberal medicine can afford to longer withhold his support from his state and national society. Let every Eclectic that desires to see a great forward movement, that wants to have some part in the successes that are just before us, decide to become a member, both of his state and national organizations.

St. Louis the Mecca in 1904.—This will be an opportune year to join the National. The eyes of the world are turned to the "Ivory City," and the \$50,000,000 fair will be the marvel of the world. Every eclectic physician must visit St. Louis, the World's Fair, and the National Association in June.

The Time.—Don't forget the date: Tuesday, June the 14th, 15th, 16th, 17th, 18th.

Eclectic Day.—The fair commissioners have designated Wednesday, June 15th, as Eclectic Day. Just what will be in for the day is not known, but you may be sure that it will be an occasion long to be remembered.

Every eclectic, regardless of his be-



ing a member of the National, should be on hand to swell the crowd and incidentally to have the time of his life.

Headquarters.—The Hotel Epworth has been selected as headquarters and place of meeting. The hotel is located three blocks north of the fair grounds, or within four minutes' walk of the main entrance to the fair.

The association has engaged the entire second floor of the hotel, or 150 rooms, at a rate of \$100 a day, two persons in a room. It is very important that every physician who expects to attend the Association secure his room as soon as possible. There are only fifty rooms left on this floor, and they are going rapidly. Write at once to Dr. H. H. Helbing, 4235 West Belle Place and secure your room.

The Papers.—Section work has been divided into three departments, namely: Medicine, Surgery, and Specialties, and it is now the intention to run the three departments at the same time: in this way most of the papers can be read and discussed. Doctor, come prepared to either read a paper or take part in the discussion.

R. L. THOMAS, M. D.,  
Cincinnati, O. President.

#### American Medical Association Convention.

We have been informed that the Deimel Linen-Mesh Company will again have an attractive exhibit at the American Medical Association meeting at Atlantic City in June. Dr. Deimel underwear is deservedly popular with the physician who knows that the Linen-Mesh is a delight to the skin

and that its absorbent qualities quickly remove all bodily moisture, giving a perpetual feeling of cleanliness and comfort.

#### New York Eclectic Medical Association.

The attendance at the forty-fourth annual meeting of the Eclectic Medical Society of New York, which has just been held at Albany, was the largest in the history of the association. E. H. King, M. D., of Saratoga, presided and delivered a most able address, in which he dwelt on the need of a more perfect organization of the county societies.

The treasurer's report showed that the society's finances were in good shape, and fifty new members were elected.

A meeting of the American Confederation reciprocating and licensing medical boards will be held at the Great Northern Hotel, Chicago, Tuesday, May 24th next, beginning at nine a. m.

Several eminent members of the profession interested in interstate reciprocity have been invited to be present and will deliver addresses on practical subjects connected with the objects of the Confederation.

At the present time the following states are reciprocating under Qualification Nos. 1 or 2, or under both such qualifications: Illinois, Kentucky, New Jersey, Maine, Maryland, Indiana, Nebraska, Ohio, Wisconsin, Iowa, and Michigan.

The seventh annual meeting of the American Gastro Enterological Asso-



ciation will be held at Haddon Hall, Atlantic City, N. J., June 6th and 7th, 1904. The preliminary programme promises an interesting and instructive meeting.

The twenty-ninth annual meeting of the American Academy of Medicine will be held at the Shelburne, Atlantic City, beginning on Saturday, June 4th, at 11 a. m., and continuing through Monday the 6th.

The programme includes :

1. The report of the council on the recommendation of a paper read at the last meeting by Dr. H. Bert Ellis, of California, on "The Necessity for a National Bureau of Medicine and Foods."

2. The report of the committee to investigate the teaching of hygiene in our public schools.

In order that this report may be discussed intelligently, the committee will publish the laws relating to the teaching of hygiene now in force in the United States, in the bulletin of the American Academy of Medicine, to be published in April, 1904. It is believed this is the most complete and accurate compilation of these laws published, and the only compilation issued in an easily accessible and low-priced publication. (Any number of the bulletin will be sent to any address upon receipt of fifty cents.)

3. The reports on the results of the examinations before the various state boards of medical examiners of 1903.

4. A symposium on the relation of physicians to dentists and pharmacists. Several papers of value are promised

for this symposium and the subsequent general discussion will be helpful.

5. A symposium on "Are Modern School Methods in Keeping with Physiologic Knowledge?" There is probably no subject of general interest that should be directed by the medical profession of more importance than this. Apart from the papers promised, arrangements are being made for a discussion opening up the whole subject from various points of view.

6. In addition to the above, there will be several papers upon independent topics, affording a variety to the programme.

The New England Eclectic Medical Association will hold its tenth annual meeting June 2d and 3d, 1904, at the Thorndike, Boston, Mass. Percy Lee Templeton, M. D., President; Sylvina Apphia Abbott, M. D., recording secretary.

### *Reviews and Extracts.*

#### Some of the Physical Properties and Medical Uses of Radium Salts.

Williams (*Medical News*, February 6th) says that it maintains a temperature above its surroundings under thermal insulation; a temperature of 1.15 C. has been observed. It is luminescent. It is a spontaneous source of electricity. It gives out three kinds of rays, named by Rutherford, alpha, beta, and gamma. It produces in surrounding objects what Mme. Curie has called "induced radio-activity," what Rutherford has called "excited radio-



activity," and Soddy now terms "imparted radio-activity." With our present knowledge of the subject, the last name seems most appropriate.

The alpha rays are the most plentiful. They are easily absorbed and are slightly deflected by a strong magnetic field. The beta rays are less easily absorbed and are more strongly deflected by a magnetic field. The gamma rays are the most penetrating of the three, and are not deviated by the magnetic field.

The rays from radium increase the electrical conductivity of gases, excite phosphorescence and fluorescence in certain substances, act on a photographic plate, and produce both harmful and beneficial effects on animal tissues.

Radium rays do not show sufficient differentiation between tissues to render them of value for diagnostic purposes. They are, however, of value as a therapeutic agent. In using them, when a strong exposure is desired, the metal box containing the salts is placed on the part to be treated; if a weaker action is wished the box is placed at a greater or less distance, according to the needs of the case, the intensity of the rays diminishing as the square of the distance. Over-exposure may cause a burn, which may not manifest itself for some days. Exposures differ for different diseases, even superficial ones.

Of forty-two cases treated, nine were skin diseases, one a keloid, five rodent ulcers, twenty-three were epidermoid carcinoma, and four "breast cases."

He states that there is much similar-

ity between the action of radium rays and X-rays, and that, if the results from the use of the former prove permanent, the two will supplement each other.

"Certain diseases promise to yield more readily to treatment by radium and others to X-rays.

"A disease that has attacked different parts of the body of a given patient may be better treated in certain regions by radium and in others by X-rays.

"It is quite possible that in some cases the two remedies used together on the same area and at the same sitting may accomplish better results than either alone."—*The Charlotte Medical Journal*.

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#### The Clinical Significance of Pain in the Epigastrium.

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Frank H. Murdoch declares that pain in the epigastrium may be due to hyperacidity, hypersecretion, hyperesthesia of the stomach, nervous gastralgia, biliary colic, certain affections of the spinal chord, cancer, gastric ulcer, pancreatitis, some forms of appendicitis, and Addison's Disease. The pain of hyperacidity comes on one or two hours after meals and ceases at the end of the digestive period. It may be temporarily relieved by the ingestion of food and alkalies. The pains of the periodic hypersecretion comes on suddenly in the midst of perfect health. Besides pain, there is extreme thirst and vomiting of large quantities of hot, sour gastric juice. In hyperesthesia of the stomach, the pain appears immediately



after eating. In nervous gastralgia the pain is intense, either sharply localized or diffuse. In biliary colic, the attacks appear only at intervals, and have no relation to the taking of food. The attacks are sudden and are apt to be followed by jaundice. In cancer of the stomach, pain is the most constant of all the symptoms. It does not depend upon the taking of food. The pain of gastric ulcer usually comes on from ten to twenty minutes after the ingestion of food, and disappears at the completion of gastric digestion. There is often intense pain in the epigastrium in Addison's Disease. The weakness, however, characteristic of the disease appears before the pain.—*Medical Record*.

#### The Use of Silver Foil to Prevent Adhesions in Brain Surgery.

The use of this material is commended by M. L. Harris, who reviews the literature of the employment of this class of substances, and adds illustrative cases from his own experience. Regarding the technicalities of the method, he notes that the traumatism incident to the operation should be as slight as possible. A bone flap which can be replaced is preferable, when possible, to the trephine opening with the bone left out. Before the introduction of any substance hemorrhage should be perfectly controlled and all blood clots removed. The substance should extend well beyond the edge of the area involved in the adhesions. There should be no openings or breaks in the substance. The material must

be one which can be sterilized. The wound must heal in a perfectly aseptic manner.—*Medical Record*.

Resection of the omentum is a procedure which seldom seems to give rise to additional shock, and which is easy to perform. Hence it is always best to resect protruding omentum if it is much in the way, or if it is soiled, or much congested, or simply difficult to reduce.

Never anesthetize a patient suffering from fracture without first seeing that he will be unable to injure the fractured limb if he struggles. The limb should be well retained by a splint, or carefully fastened to the table or held by an assistant. A dose of morphia a half hour before anesthesia will diminish the struggles, if there is no contra-indication to its use.—*International Journal of Surgery*.

#### *The New Hospital at Los Angeles.*

JOHN URI LLOYD.

This admirable institution is entirely under the medical and surgical management of the Eclectic physicians in and about Los Angeles. It has the name German Deaconess' Hospital, and was built by the German Methodists, being conducted by them after the admirable manner of the well-known Bethesda Hospital of Cincinnati, from which mother house came the matron, Miss Ella Shela, and several experienced deaconesses.

This new hospital is in every way abreast of the times, both in manage-



ment and equipment. The cost of the building has been over \$50,000. It is a four-story structure, sixty feet frontage, one hundred and twenty feet deep. It has two operating rooms, with all modern equipment and latest surgical appliances, and has forty rooms for patients. Elaborate care has been taken to arrange for antiseptic and spray baths for nurses and others to whom such attention may be necessary. The plumbing, heating, ventilating, and lighting systems are in accord with the most modern conception of sanitary and aseptic hospital construction, and throughout the hospital is complete.

While the building is erected by the German Methodist-Episcopal Deaconess Hospital Association, some of the rooms are furnished by individuals or societies. The medical services, as has been stated, will be Eclectic, Dr. O. C. Welburn being Medical Director.

The foregoing brief statement of fact is sufficient to inform our people that in Los Angeles their friends, both traveling and resident, may now receive the very best hospital and medical attention. The writer of this has been aware of the project since its incipency, and now, that it is carried to a successful end, congratulates the founders and the people to be served on the completion of the laudable enterprise. When Dr. Welbourn announces his staff, it will be seen that in Los Angeles our school is amply able to care for an enterprise such as this, and in its record therein will do itself proud. Be it enough to say, in this

preliminary notice, that if you have a friend in California likely to need hospital care or a patient going to California, the German Deaconess' Hospital offers every needful opportunity both as to equipment and professional services. In it your patients can have the full benefit of the kindly Eclectic system of practice. For details, address Dr. O. C. Welbourn, Los Angeles, Cal., or any Eclectic physician in Los Angeles or Southern California.

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#### IN SPITE OF TEACHERS AND TEXT-BOOKS.

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The days of the cotton jacket and the linseed poultice seem to be past. Perhaps the applications valued most highly by medical teachers at this time are the cold ones either in the form of ice-bags or cold compresses frequently changed. These, when placed over the seat of disease, seem to give decided relief, to modify the temperature, and to hasten early resolution. But in spite of their advocacy in the text-books, the rank and file of the profession do not take to them kindly.

Antiphlogistine now enjoys perhaps greater popularity in the treatment of pneumonia and other acute respiratory diseases than any other local application. This popularity seems to be well deserved. It may not modify the course of the disease to any great extent, but it certainly proves of the greatest comfort to the patient, and helps to ameliorate some of the troublesome symptoms which are characteristic of the disease. Antiphlogistine must therefore be considered a



distinct addition to our therapeutic armamentarium.—*The Medical Standard*, March, 1904.

#### THE TREATMENT OF SEROUS EFFUSIONS.

Abstract of a Clinical Lecture Delivered at the Liverpool Royal Infirmary by James Barr, M. D., F. R. C. P.

The author describes what is evidently a new method of treating serous effusions. The idea occurred to him to inject one fluid drachm of Adrenalin Chloride Solution into the pleural sac, in a case of abdominal cancer extending to the pleura, after the aspiration of a large quantity of bloody serum, the object of the injection being to lessen the secretion. There was no further secretion, consequently no further tapping, and the patient spent the remainder of her life in perfect comfort so far as her chest was concerned.

This treatment was extended to cases of ascites due to hepatic cirrhosis, in which marked results were not expected. However, the rapidity of secretion was diminished and no ill effects were noted, the quantity of Adrenalin Solution used varying from two to three fluid drachms.

In a case of pericarditis with effusion, in a lad, nineteen fluid ounces of serum was withdrawn from the pericardium, but a reaccumulation rapidly followed. The patient's condition becoming critical, the paracentesis was repeated, twenty ounces of fluid being withdrawn with immediate improvement in the quality of the pulse. Forty minims of Solution Adrenalin

Chloride, 1-1000, was injected into the pericardium. The pulse at the wrist disappeared, the boy became of an ashy, leaden hue and had an anxious expression. Immediately nitroglycerine and atropin were administered and the boy quickly rallied. No further tapping was required. The same patient had a subsequent attack of left pleurisy with effusion. Ten fluid ounces of serum were withdrawn from the chest and one fluid drachm of Adrenalin Chloride Solution was injected. There was no reaccumulation.

In a case of tuberculous peritonitis and ascites two hundred fluid ounces of serum was drawn and two fluid drachms of Solution Adrenalin Chloride introduced into the peritoneal cavity, with four pints of aseptic air (to prevent adhesions). Thirteen days later, two hundred and thirty-seven fluid ounces of serum were withdrawn and two fluid drachms of Adrenalin Chloride Solution and two pints of air were injected. Upon a third occasion, eleven days later, one hundred and ninety-six fluid ounces of serum were obtained by tapping, and three fluid drachms of Adrenalin Chloride Solution and four pints of sterile air were injected. No reaccumulation of fluid occurred.

A female child of seven years was the next patient. One pint of fluid was withdrawn from her pleural cavity, and one fluid drachm of Adrenalin Chloride Solution and half a pint of sterile air were injected. Though it was highly probable that the pleurisy was tuberculosis, there was no reaccumulation of fluid and the patient re-



covered.—*The British Medical Journal*, March 19, 1904.

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WHEN YOUR CASE IS WEAK ABUSE THE  
OTHER SIDE.

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This maxim has been a favorite stand-by with the legal profession from time immemorial, and unfortunately certain pharmaceutical manufacturers have recently seen fit to make use of that maxim. This is particularly true of the manufacturers of a certain iron preparation.

The impudence and effrontery with which these people try to hoodwink the medical profession is rather remarkable.

No other preparation ever came before the medical practitioner with so little detail as to methods of preparation, composition, therapeutic effect, etc., etc., and nevertheless the profession is asked to accept the wildest and most extravagant statements as to its wonder-working capabilities. This is not all. The makers of this preparation, in seeking the support of the profession, covertly attack and sling mud at all other iron preparations that have been before the profession for years. They single out Pepto-Mangan, a combination which has stood the tests of the leaders in the scientific medical world both here and abroad, an organic iron combination in which, in its results, the general practitioner and the hospital clinician have learned from experience to place implicit confidence.

This unbusiness-like method of attempting to cast discredit upon other

reliable and thoroughly tested combinations we can not term otherwise than despicable, and furthermore we know our readers can not be influenced by unsupported statements of financially interested parties, but will always bear in mind that Gude's Pepto-Mangan was submitted to the profession as an organic iron product, and the results obtained by its use, as also the scrutiny of analysis by chemists of repute, substantiate all that has ever been claimed for it.

Attempting to foist upon the attention of the physician a product simply by insinuation that known articles are inferior, is a manner of doing business which should receive the stamp of disapproval by every one of our profession.—*Editorial in the Toledo Medical and Surgical Reporter*, April, 1904.

No more healthful, stimulating, and generally beneficial application can be made to a deceased mucous membrane than Kennedy's pinus canadensis.

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*Book Notes.*

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ALL BOOKS reviewed in these columns may be examined by prospective purchasers, at the JOURNAL Editorial rooms from 10 to 12 daily, within thirty days of the appearance of the review. We invite students to examine these publications. Publishers will please notify us of the net price of all books.

*The International Medical Annual for 1904* (twenty-second year).

E. B. Treat & Co., New York, publishers; price, \$3.

This year's annual contains much that is instructive and represents a large amount of careful observation.



The practical side of professional work has been kept in view with the happy result that the annual is not a mere passing review, but is of much permanent value. The researches in electro and radio-therapeutics are thoroughly discussed, as well as the most modern methods in surgery. A good deal of space is given to diseases of the eye, ear, etc., and these are illustrated with stereograms. The stereograms are quite a feature of the book. There are also a number of carefully prepared plates of small pox, variola, etc. We think the practitioner will find the book a very profitable investment.

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*Anæsthesia in Dental Surgery.*—By Thomas D. Suke, M. D., F. R. C. S. E. Robinson & Co., New York; price, \$1.50.

Among the books sent us for review there is none that we have read with greater interest than this one. It is a complete history of anæsthetics of all kinds, the proper method of administering, together with a careful study of the cases in which each is desirable and the symptoms developed under each. While the book is intended primarily for the dental surgeon, its scope is almost general and it will be of especial interest to all surgeons who find it necessary or expedient to administer an anæsthetic in their offices for minor operations. The tables of gas and ether administrations in dentistry are self-explanatory, while those of the chloroform fatalities in dentistry afford food for reflection. The latter show the sudden on-

set of the fatal symptoms. As a large number of deaths from chloroform (40%) take place in minor operations on persons in apparently good health, the importance of this little book can not be over-estimated.

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*The Skin: Its Care and Treatment.*

Published by the McIntosh Battery and Optical Company, 39 West Randolph Street, Chicago; price, \$1.50.

This very sensible and practical little book should be welcomed by the physician and the layman alike. It contains the most careful and minute directions for increasing and preserving the beauty of the skin, as well as instructions in the care of the hair, teeth, etc. Physicians, as a class, would do well to study this book and familiarize themselves with the work of that ever-increasing power in the land, the "beauty doctor." He will find that his popularity will immensely increase if instead of dismissing the small complexion worries of his women patients as trivial and beneath serious notice, he would instruct them in the best means of removing them. What seems small to the doctor is often very large to the woman. This little book will place him in a position to advise her of the most approved methods, and if he has time and patience to spare it will enable him to add very materially to his income. The methods of applying electricity to the skin are very carefully described, as well as the technique of massage and facial treatments in general. Altogether an interesting book to the doctor and a fascinating one to his patient.



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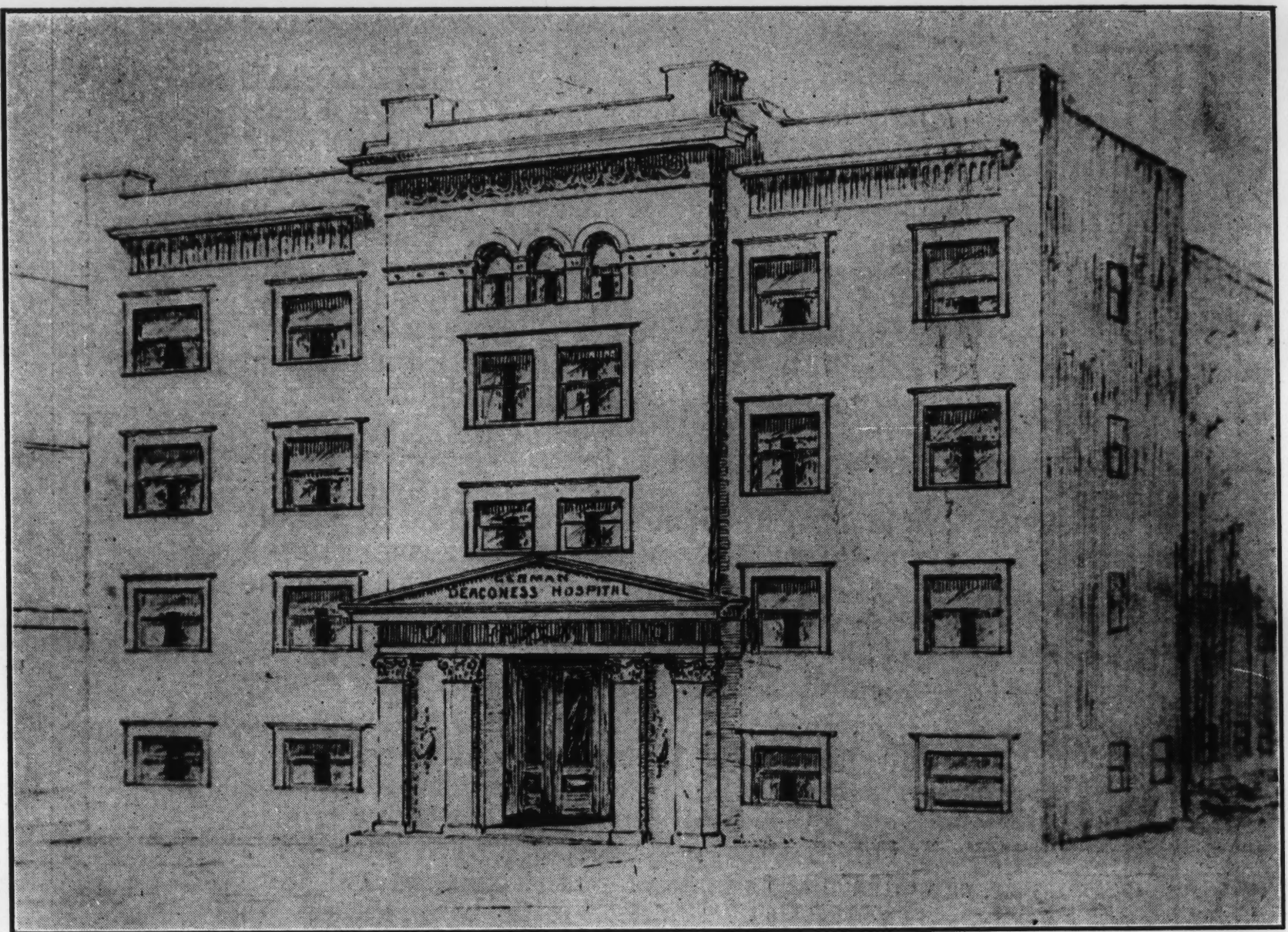
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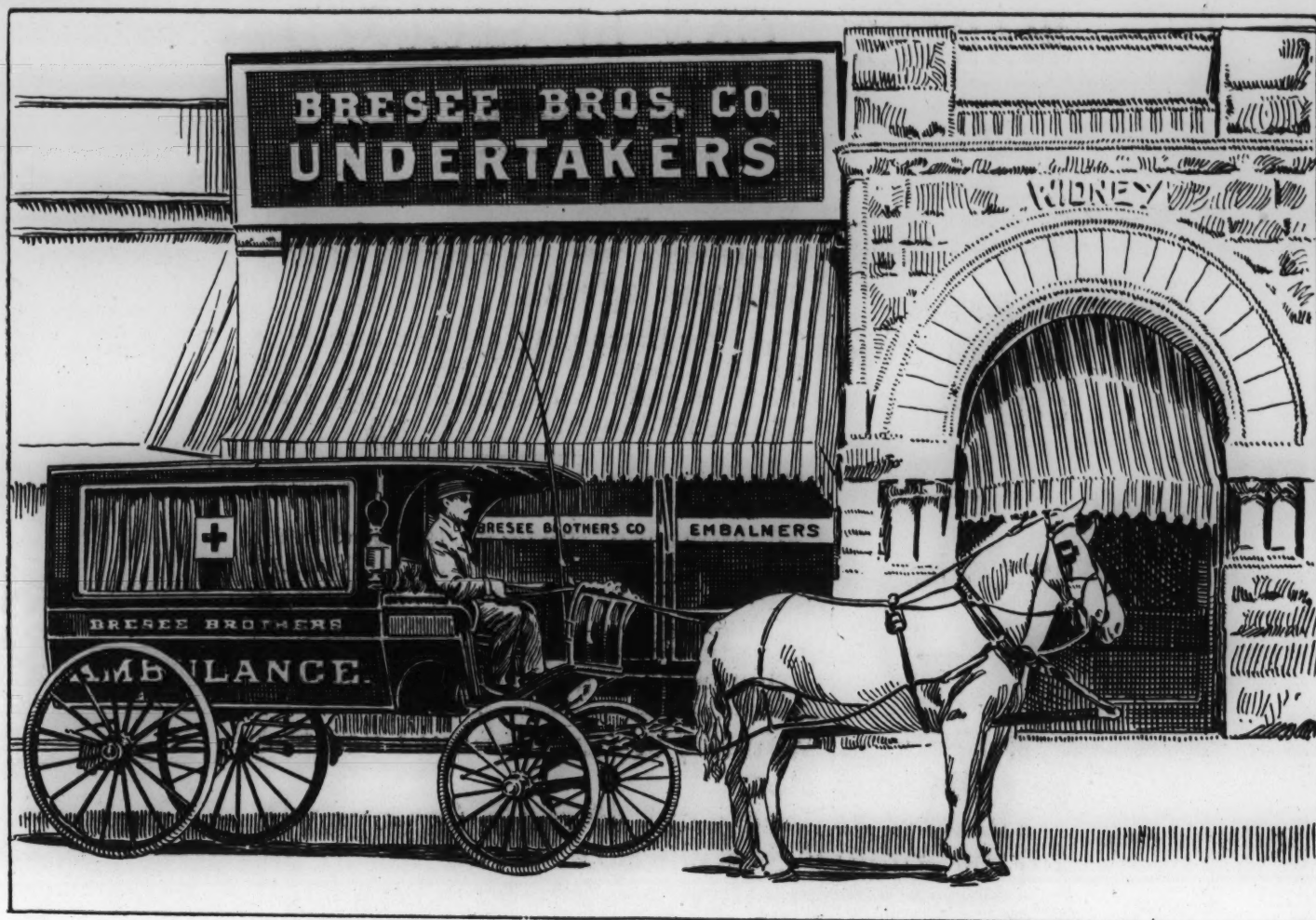
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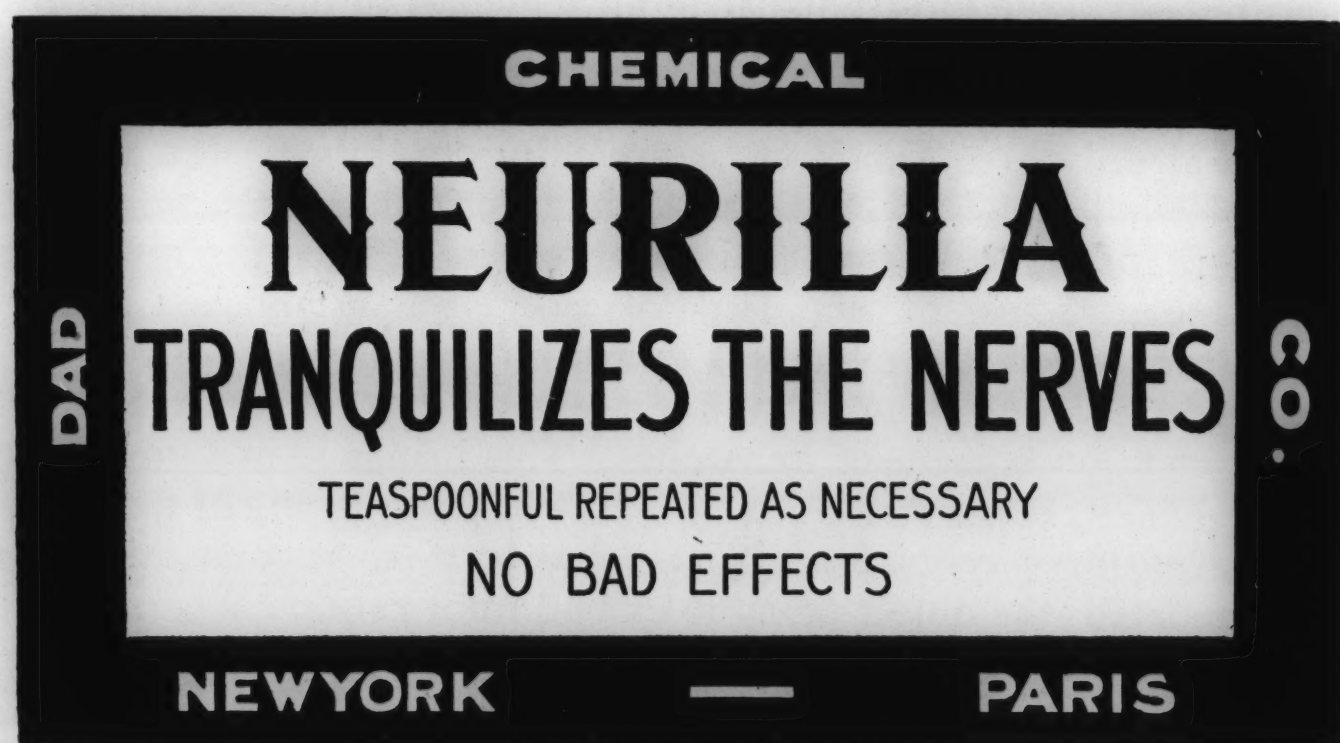


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\$ 35	Invalid Rolling Chairs.....	18.00	Urine Test Case.....	3.60
\$ 1.50	Vaginal Speculums.....	.50	Hydrometer for Static.....	1.25
\$ 2	Uterine Scissors.....	.65	Saline Outfit, in case.....	1.10
\$ 2	Metal Ear Syringes.....	.75	Bullet Probe, Fluher's.....	.40
\$ 1.25	Thermometers.....	.40	Retractors, Abdominal.....	.50
\$ 15	Centrifuge.....	6.75	Ophthalmoscope, 19 lens....	4.50
\$ 35	Water Motors.....	17.50	Pelvimeter, Collyer's.....	1.00
	Electric Motors all kinds		Perforators, Simpson's.....	1.10
	Applicators, 8 for.....	.25	Scissors, Umbilical.....	.45
	Murphy Buttons, 3 for.....	2.00	Van Buren Sounds, steel....	.20
	Soft Rubber Catheters, 3....	.40	Uterine Sound, Sim's.....	.15
	Female Catheter, Metal.....	.15	Speculum, Ear, Gruber's set	.35
	Male, " ".....	.25	Speculum, Rectal, Pratt's...	.85
	Eustachian Catheters, Metal	.15	" Vaginal, Taylor's.	.50
	Drill, Hamilton's, Bone.....	1.75	Trephine, Galt's.....	1.10
	Swartz Ear Chisel.....	.30	Tourniquet and Clasp.....	.15
	Clamps, Ferguson, 8 in., Pile	1.00	Syringe, P.D. style, Hypo-	
	Dilators, Palmer's Uterine..	1.00	dermic.....	.25
	" Goodell's ".....	2.75	Tonsillotome, Billing's.....	3.75
	Curettes Gottstein Adenoid..	.90	Rubber Operating Gloves...	.60
	Kelley Cushion 20x44.....	2.20	Razor, fine, for shaving....	1.00
	Depressor, Pynchon's tongue	.50	Kelley's Leg Holders.....	.80
	Cautery Knives, 3 for.....	1.00	24 Surgeon's Needles.....	.45
	" Battery.....	15.00	Potaine's Aspirator, in case..	4.40
	Forceps, Bone, Liston's.....	1.40	12 Books Litmus Paper.....	.25
	" " Tieman's....	.75	Glass Eyes.....	1.00
	" Polypus cutting,		X-Ray Tubes.....	5.50
	Heyman.....	1.00		

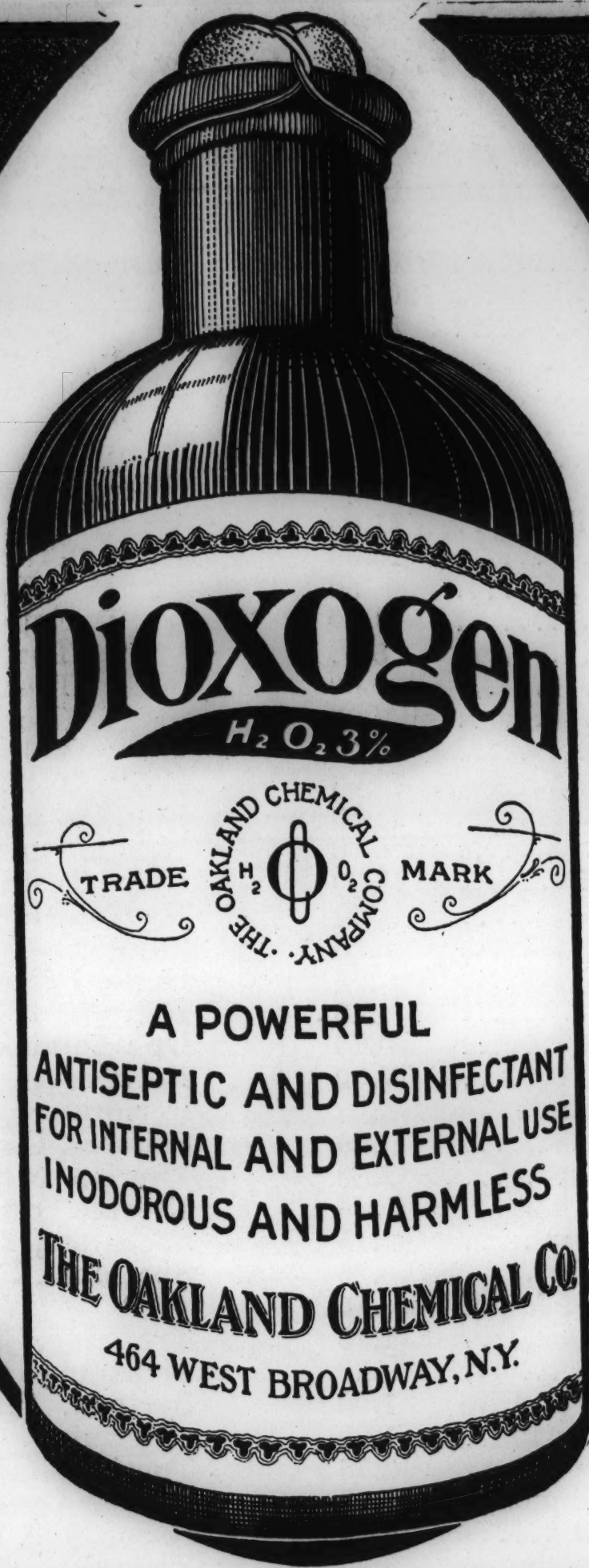
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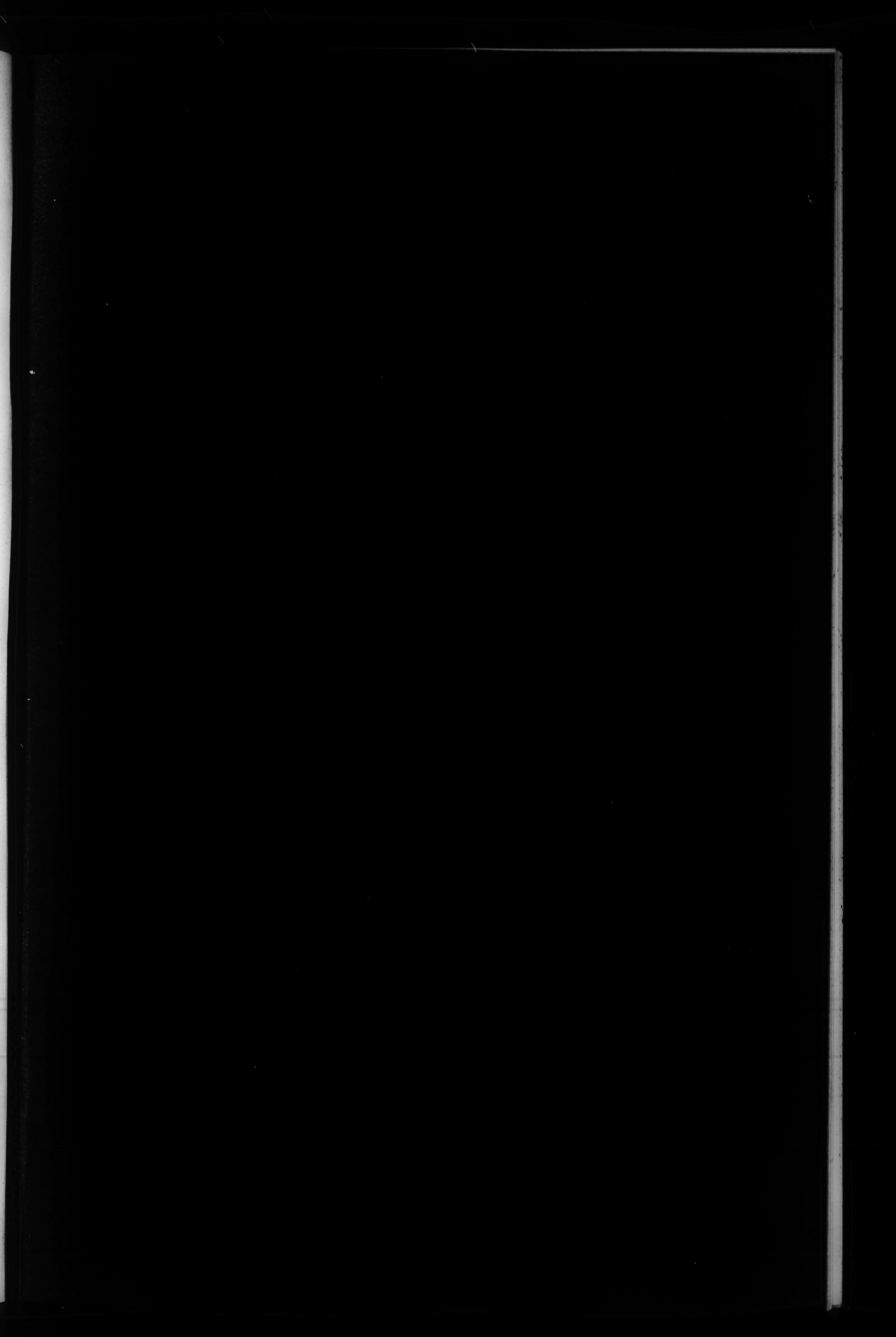


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